Abstract

A fuel cell stack with a plurality of fuel cell elements which are layered on one another with separating plates located between the fuel cell elements. Inside channels are formed to supply a combustion gas and discharge the exhaust gas. The fuel cell stack is characterized in that, on a first side of the fuel cell elements, several parallel lengthwise channels are formed for routing of the combustion gas, and on the ends of the channels, a distributor zone is formed which connects the supply channel to the respectively first ends of the lengthwise channels, and a collecting zone is formed which connects the discharge channel to the second ends of the lengthwise channels, and that there is an oxidizer guide on the second side of the fuel cell elements, the oxidizer guide running in the direction of the lengthwise channels.